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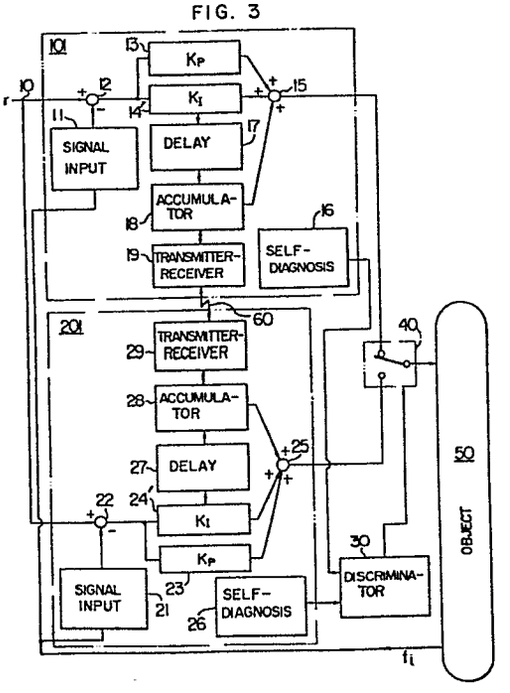
## (54) Multiple digital controller system.

(57) In a multiple digital controller system which comprises a main or first digital controller (101) and at least one stand-by or second digital controller (201) and in which the main digital controller (101) normally applies the control signal to an object to be controlled (50), and the stand-by digital controller (201) applies the control signal to the controlled object (50) when the main digital controller (101) is disabled, an improvement is made so that an undesirable level variation may not substantially occur in the control signal applied to the controlled object (50) during the transient state of switch-over from the main digital controller (101) to the stand-by digital controller (201). In the improved multiple digital controller system according to the present invention, the integral calculation to be carried out in the stand-by digital controller (201) in a period n (n = 2, 3, .....) is executed on the basis of the data representing the result of integral calculation carried out in the preceding period (n−1) in the main digital controller (101) and transmitted from the main digital controller (101), in order to eliminate the influence of the difference in conversion error occurring in the A/D converters of the digital controllers.

FIG. 3

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# EUROPEAN SEARCH REPORT

Application number

EP 81 10 4317

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl. ³) |
|---|---|---|---|
| A | MESURES, REGULATION, AUTOMATISME, vol.40, no.11, November 1975, Paris (FR) A. SABATIER: "Application pratique des microproc esseurs aux mesures, régulations, automatismes", pages 51-59 * page 53, column 1, lines 18-53; figure 3; page 54, column 3, lines 18-49; figure 7; page 56, column 1, lines 45-46 * | 1 | G 06 F 11/20<br>G 06 F 15/46<br>G 05 B 9/03<br>G 05 B 15/02 |
| A | ELEKTRONIK, vol.25, no.3, 1976, München (DE) H. BIRCK: "Digitale Regelung durch Mikroprozessoren", pages 87-89 * page 87, column 1, lines 13-17; page 88, column 2, lines 1-20; figure 3 * | 1 | |
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| A | GB-A-2 000 609 (SMITHS INDUSTRIES) * claims 1-5 * | 1 | |
| A | GB-A-2 030 334 (UNITED TECHNOLOGIES) * claims * | 1 | |

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| THE HAGUE | 08-09-1982 | GUIVOL Y. |

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